

UNITED STATES PATENT AND TRADEMARK OFFICE

SERIAL NO: 79/030648

MARK: MICROBOND

CORRESPONDENT ADDRESS:

SCOTT D. WOLDOW  
SMITH, GAMBRELL & RUSSELL,  
I.L.P.  
1130 CONNECTICUT AVE NW  
STE 1130  
WASHINGTON, DC 20036-3936

RESPOND TO THIS ACTION:

<http://www.uspto.gov/teas/eTEASpageD.htm>

GENERAL TRADEMARK INFORMATION:

<http://www.uspto.gov/main/trademarks.htm>

APPLICANT: Umicore AG & Co. KG

CORRESPONDENT'S  
REFERENCE/DOCKET NO:

034166.033

CORRESPONDENT E-MAIL ADDRESS:

FINAL OFFICE ACTION

TO AVOID ABANDONMENT, THE OFFICE MUST RECEIVE A PROPER RESPONSE TO THIS OFFICE ACTION WITHIN 6 MONTHS OF THE ISSUE/MAILING DATE.

ISSUE/MAILING DATE:

THIS IS A FINAL ACTION.

Applicant is requesting reconsideration of a final refusal issued/mailed May 1, 2008.

After careful consideration of the law and facts of the case, the examining attorney must deny the request for reconsideration and adhere to the final action as written since no new facts or reasons have been presented that are significant and compelling with regard to the point at issue.

Accordingly, the applicant's request for reconsideration is *denied*. The time for appeal runs from the date the final action was issued/mailed. 37 C.F.R. Section 2.64(b); TMEP Section 715.03(c). If the applicant has already filed a timely notice of appeal, the application will be forwarded to the Trademark Trial and Appeal Board (TTAB).

The applicant should note the specific reasoning below.

This letter is in response to the applicant's communication received October 30, 2008, wherein the applicant argued against the Section 2(d) refusal and amended its identification of goods. The identification of goods is acceptable and made of record. The Section 2(d) final refusal is maintained for the reasons below.

**Section 2(d) Likelihood of Confusion Final Refusal**

The examining attorney refuses registration under Trademark Act Section 2(d), 15 U.S.C. §1052(d),

because the applicant's mark, when used on or in connection with the identified goods, so resembles the mark in U.S. Registration No. 0785606 as to be likely to cause confusion, to cause mistake, or to deceive. See TMEP §§1207.01 *et seq.*

The court in *re E. I. DuPont de Nemours & Co.* listed the principal factors to be considered in determining if there is a likelihood of confusion. 476 F.2d 1357, 177 USPQ 563 (C.C.P.A. 1973). A likelihood of confusion determination requires a two-part analysis. First, the marks are compared for similarities in appearance, sound, connotation and commercial impression. TMEP §§1207.01 and 1207.01(b). Second, the goods are compared to determine whether they are similar or commercially related or whether they travel in the same channels of trade. See *Herbko Int'l, Inc. v. Kappa Books, Inc.*, 308 F.3d 1156, 1164-65, 64 USPQ2d 1375, 1380 (Fed. Cir. 2002); *Han Beauty, Inc. v. Alberto-Culver Co.*, 236 F.3d 1333, 1336, 57 USPQ2d 1557, 1559 (Fed. Cir. 2001); *In re August Storck KG*, 218 USPQ 823 (TTAB 1983); TMEP §§1207.01 and 1207.01(a)(vi).

The applicant states that the term MICROBOND is in a crowded field and, thus, the applicant's design element of a stylized "M" distinguishes its mark. The mark MICROBOND, however, is strong for the relevant goods and, thus, entitled to greater protection than a weak mark. As the attached search printout shows, there are only nine hits for the mark MICROBOND on the entire register, where two of these hits contain additional distinctive wording. The one application is the instant applicant. One registration is of the cited registrant. The remaining seven registrations are for the unrelated goods: dental alloys and restorations, petroleum wax compounds as adhesives and hot melts, fingernail curing kits being cosmetics, medical glue, fishing lines and industrial adhesives. See attached search printout and nine attached registration and application printouts.

The applicant states that its goods and the registrant's goods are unrelated and travel in different channels of trade. The evidence of record shows that soldering and resistance welding are both types of welding. Thus, the applied-for goods and the registered goods are both directed toward people who need to join metals. See the document "Welding and Gas Metal Arc Welding (GMAW)" and located online at [http://www.engr.ku.edu/~rhale/ae510/websites\\_f02/welding\\_and\\_gmaw.ppt#256,1,Welding and Gas Metal Arc Welding \(GMAW\)](http://www.engr.ku.edu/~rhale/ae510/websites_f02/welding_and_gmaw.ppt#256,1,Welding and Gas Metal Arc Welding (GMAW))

Furthermore, the registrant's web site states that its identified goods are for use in manufacturing computer and disk drive components, like the applicant's goods. See attached web page printouts from registrant's web site stating that both soldering and resistance welding are used to manufacture electronics, and that they provide both welding and soldering machines.

Also see attached web page printout from third party (Welding Machines & Equipment) showing that its resistance soldering machine is a sub-set of resistance welders that uses solder for electronics manufacturing. Also attached is a web page printout from a medical paper showing that resistance welding was used to solder dental apparatus and additional third-party registrations.

Although the applicant states that the third-party registrations already of record do not specify "for use in manufacturing electronic components," those registrations, in the very least, show that the applied-for goods and the registered goods travel in the same channels of trade. Nevertheless, even if the third-party registrations do not specify "for use in manufacturing electronic components," it does not mean that the registrations exclude such use. It is well settled that likelihood of confusion is determined on the basis of the goods as they are identified in the application and the registration. *Canadian Imperial Bank of Commerce v. Wells Fargo Bank*, 811 F.2d 1490, 1 USPQ2d 1813 (Fed. Cir. 1987); *Paula Payne Products Co. v. Johnson Publishing Co., Inc.*, 473 F.2d 901, 177 USPQ 76 (C.C.P.A. 1973). If the identifications of the registrants' goods are broad, it is presumed that the registrations encompass all

goods of the type described, including those in the applicant's more specific identification, that they move in all normal channels of trade and that they are available to all potential customers. *In re Elbaum*, 211 USPQ 639, 640 (TTAB 1981); *In re Optica International*, 196 USPQ 775 (TTAB 1977); TMEP §1207.01(a)(iii).

Because the marks are virtually identical in sound, connotation and commercial impression and highly similar in appearance and because the goods are highly related, the FINAL refusal is *maintained*. Because the applicant has already filed a timely notice of appeal, the application will be forwarded to the Trademark Trial and Appeal Board (TTAB).

/LeighLowry/  
Leigh A. Lowry  
Trademark Examining Attorney  
U.S. Patent and Trademark Office  
Law Office 115  
(571) 272-9725

**RESPOND TO THIS ACTION:** Applicant should file a response to this Office action online using the form at <http://www.uspto.gov/teas/eTEASpageD.htm>, waiting 48-72 hours if applicant received notification of the Office action via e-mail. For *technical* assistance with the form, please e-mail [TEAS@uspto.gov](mailto:TEAS@uspto.gov). For questions about the Office action itself, please contact the assigned examining attorney. **Do not respond to this Office action by e-mail; the USPTO does not accept e-mailed responses.**

If responding by paper mail, please include the following information: the application serial number, the mark, the filing date and the name, title/position, telephone number and e-mail address of the person signing the response. Please use the following address: Commissioner for Trademarks, P.O. Box 1451, Alexandria, VA 22313-1451.

**STATUS CHECK:** Check the status of the application at least once every six months from the initial filing date using the USPTO Trademark Applications and Registrations Retrieval (TARR) online system at <http://tarr.uspto.gov>. When conducting an online status check, print and maintain a copy of the complete TARR screen. If the status of your application has not changed for more than six months, please contact the assigned examining attorney.

Statistics for application #79030648

#	Total Marks	Dead Marks	Live Viewed Docs	Live Viewed Images	Printed	Status/ Search Duration	Search
01	1	0	1	1	0	0:01	79030648[SN]
02	4261	N/A	0	0	0	0:03	*micro*[bi,ti] not dead[ld]
03	1771	N/A	0	0	0	0:03	*bond*[bi,ti] not dead[ld]
04	9	0	1	1	0	0:01	2 and 3

Session started 1/14/2009 5:52:11 PM

Current time 1/14/2009 5:52:31 PM

Total search duration 0 minutes 8 seconds

Session duration 0 minutes 20 seconds

Default NEAR limit= 1 ADJ limit= 1

**Print: Jan 14, 2009**

**72164407**

**TYPED DRAWING**

**Serial Number**

72164407

**Status**

REGISTERED AND RENEWED

**Word Mark**

MICROBOND

**Standard Character Mark**

No

**Registration Number**

0785606

**Date Registered**

1965/02/23

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(1) TYPED DRAWING

**Owner**

MIYACHI UNITEK CORPORATION CORPORATION - EXISTS UNDER LAWS OF DELAWARE  
1900 WALKER STREET MONROVIA CALIFORNIA 91017

**Goods/Services**

Class Status -- ACTIVE. IC 011. US 034. G & S: ELECTRICAL  
RESISTANCE WELDERS. First Use: 1962/12/28. First Use In Commerce:  
1962/12/28.

**Filing Date**

1963/03/11

**Examining Attorney**

UNKNOWN

**Attorney of Record**

D. BRUCE PROUT

**Print: Jan 14, 2009**

**72029132**

**TYPED DRAWING**

**Serial Number**

72029132

**Status**

REGISTERED AND RENEWED

**Word Mark**

MICRO-BOND

**Standard Character Mark**

No

**Registration Number**

0659433

**Date Registered**

1958/03/11

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

{1} TYPED DRAWING

**Owner**

DENTSPLY INTERNATIONAL INC. CORPORATION DELAWARE 221 WEST PHILADELPHIA STREET YORK PENNSYLVANIA 174050872

**Goods/Services**

Class Status -- ACTIVE. IC 010. US 044. G & S: ALLOYS FOR MAKING PARTIAL DENTAL RESTORATIONS, PORCELAIN MATERIALS FOR USE AS A FACING ON SUCH RESTORATIONS, AND THE DENTAL RESTORATIONS THEMSELVES RESULTING FROM THE USE OF SUCH MATERIALS. First Use: 1956/11/15. First Use In Commerce: 1956/11/15.

**Filing Date**

1957/04/30

**Examining Attorney**

UNKNOWN

**Attorney of Record**

Justin H. McCarthy II

**Print: Jan 14, 2009**

**73548528**

**TYPED DRAWING**

**Serial Number**

73548528

**Status**

REGISTERED AND RENEWED

**Word Mark**

MICROBOND

**Standard Character Mark**

No

**Registration Number**

1379912

**Date Registered**

1986/01/28

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(1) TYPED DRAWING

**Owner**

THE INTERNATIONAL GROUP, INC. CORPORATION DELAWARE 50 SALOME DRIVE  
AGINCOURT ONTARIO M1S 2A8

**Goods/Services**

Class Status -- ACTIVE. IC 001. US 005 015. G & S: PETROLEUM  
PRODUCTS, NAMELY, PETROLEUM WAX COMPOUNDS FOR USE AS LAMINATING  
ADHESIVES AND HOT MELTS.

**Foreign Country Name**

CANADA

**Foreign Registration Number**

157,863

**Foreign Registration Date**

1968/08/02

**Foreign Expiration Date**

1998/08/02

**Filing Date**

**Print: Jan 14, 2009**

**73548528**

1985/07/17

**Examining Attorney**  
STRASER, RICHARD A

**Attorney of Record**  
JAMES B. URIE



Print: Jan 14, 2009

74556895

**TYPED DRAWING**

**Serial Number**

74556895

**Status**

REGISTERED AND RENEWED

**Word Mark**

MICROBOND

**Standard Character Mark**

No

**Registration Number**

2002164

**Date Registered**

1996/09/24

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(1) TYPED DRAWING

**Owner**

OPI Products, Inc. CORPORATION CALIFORNIA 13034 Saticoy St. North  
Hollywood CALIFORNIA 91605

**Goods/Services**

Class Status -- ACTIVE. IC 003. US 001 004 006 050 051 052. G & S:  
fingernail curing kits comprised of nail bonding agents, light curing  
gels, nail tips, nail wipe solutions, brushes, brush cleaners, lamp  
unite, bulbs, lamp cleaners, hand lotions, oils, cuticle sticks, nail  
files, emery squares. First Use: 1994/03/00. First Use In Commerce:  
1994/03/00.

**Filing Date**

1994/08/03

**Examining Attorney**

CONN, WILLIAM A.

**Attorney of Record**

Eric S. Hyman

Print: Jan 14, 2009

77127161

**DESIGN MARK**

**Serial Number**

77127161

**Status**

REGISTERED

**Word Mark**

MICROBOND

**Standard Character Mark**

Yes

**Registration Number**

3558188

**Date Registered**

2009/01/06

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(4) STANDARD CHARACTER MARK

**Owner**

MICROTEK MEDICAL EUROPE LIMITED CORPORATION UNITED KINGDOM 1 Gladman  
Business Park, Dalewood Road Newcastle-under-Lyme Staffordshire  
ENGLAND ST59QH

**Goods/Services**

Class Status -- ACTIVE. IC 010. US 026 039 044. G & S: Medical  
apparatus for surgical use, namely, glue for internal fixation of mesh  
and external use for small cuts and wounds. First Use: 2007/09/30.  
First Use In Commerce: 2007/09/30.

**Filing Date**

2007/03/09

**Examining Attorney**

CARRUTHERS, ALICE SUE

**Attorney of Record**

Valerie Verret

**MICROBOND**

**Print: Jan 14, 2009**

**78519698**

**DESIGN MARK**

**Serial Number**

78519698

**Status**

REGISTERED

**Word Mark**

MICROBOND

**Standard Character Mark**

Yes

**Registration Number**

3041324

**Date Registered**

2006/01/10

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(4) STANDARD CHARACTER MARK

**Owner**

CENZONE TECH, INC. CORPORATION CALIFORNIA 2110 LOW CHAPARRAL DRIVE SAN  
MARCOS CALIFORNIA 920699773

**Goods/Services**

Class Status -- ACTIVE. IC 031. US 001 046. G & S: NON-MEDICATED  
ALL NATURAL ANIMAL FEED ADDITIVE WHICH PROMOTES GROWTH AND PRODUCTION.

First Use: 2001/01/00. First Use In Commerce: 2001/01/00.

**Filing Date**

2004/11/18

**Examining Attorney**

BENMAMAN, ALICE

**MICROBOND**

**Print: Jan 14, 2009**

**78644659**

**DESIGN MARK**

**Serial Number**

78644659

**Status**

REGISTERED

**Word Mark**

ADVANCED MICROBOND

**Standard Character Mark**

Yes

**Registration Number**

3184863

**Date Registered**

2006/12/12

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(4) STANDARD CHARACTER MARK

**Owner**

Pure Fishing, Inc. CORPORATION IOWA 1900 18th Street Spirit Lake IOWA  
51360

**Goods/Services**

Class Status -- ACTIVE. IC 028. US 022 023 038 050. G & S: FISHING  
LINES. First Use: 2003/05/15. First Use In Commerce: 2003/07/21.

**Filing Date**

2005/06/06

**Examining Attorney**

SAUNDERS, ANDREA

**Attorney of Record**

Lance Johnson

**ADVANCED MICROBOND**

Print: Jan 14, 2009

79030648

**DESIGN MARK**

**Serial Number**

79030648

**Status**

EX PARTE APPEAL PENDING

**Word Mark**

MICROBOND

**Standard Character Mark**

No

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(3) DESIGN PLUS WORDS, LETTERS AND/OR NUMBERS

**Owner**

Umicore AG & Co. KG LIMITED PARTNERSHIP FED REP GERMANY Rodenbacher  
Chaussee 4 63457 Hanau-Wolfgang FED REP GERMANY

**Goods/Services**

Class Status -- ACTIVE. IC 001. US 001 005 006 010 026 046. G & S:  
Chemicals for soldering of metals as part of electronic components.

**Goods/Services**

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S:  
Integrated circuit chips.

**Goods/Services**

Class Status -- ACTIVE. IC 006. US 002 012 013 014 023 025 050. G  
& S: Common metals and their alloys, namely tin alloys, lead alloys,  
copper and its alloys, German silver alloys and silver solder alloys  
for use in manufacturing electronic components; brazing alloys,  
namely, copper and its alloys, German silver alloys, silver solder  
alloys, nickel alloys, cobalt alloys and germanium alloys for use in  
manufacturing electronic components; soldering wire of metal for use  
in manufacturing electronic components; rods of metal for brazing for  
use in manufacturing electronic components; metals in powder form for  
use in manufacturing electronic components; common metals, unwrought  
or semi-wrought, namely, tin, lead, copper, German silver, silver  
solder, nickel, cobalt and germanium for use in manufacturing  
electronic components.

**Goods/Services**



**Print: Jan 14, 2009**

**79030648**

Class Status -- ACTIVE. IC 014. US 002 027 028 050. G & S:  
Precious metals and their alloys for use in manufacturing electronic  
components; goods in precious metals or coated therewith in the form  
of sealing rings, ribbons, foils, wires, wire rings, disks, squares,  
frames and washers for use in manufacturing electronic components.

**Priority Date**

2006/02/09

**Description of Mark**

The color black appears in the wording "MICROBOND"; the color blue  
appears in the zigzagging line above the wording.

**Colors Claimed**

The color(s) black and blue is/are claimed as a feature of the mark.

**Filing Date**

2006/08/08

**Examining Attorney**

LOWRY, LEIGH



Print: Jan 14, 2009

79037404

**DESIGN MARK**

**Serial Number**

79037404

**Status**

REGISTERED

**Word Mark**

MICROBONDGECKO

**Standard Character Mark**

Yes

**Registration Number**

3348918

**Date Registered**

2007/12/04

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(4) STANDARD CHARACTER MARK

**Owner**

Umicore AG & Co. KG LIMITED PARTNERSHIP FED REP GERMANY Rodenbacher  
Chaussee 4 63457 Hanau FED REP GERMANY

**Goods/Services**

Class Status -- ACTIVE. IC 001. US 001 005 006 010 026 046. G & S:  
Adhesives for industrial purposes.

**Priority Date**

2006/10/09

**Filing Date**

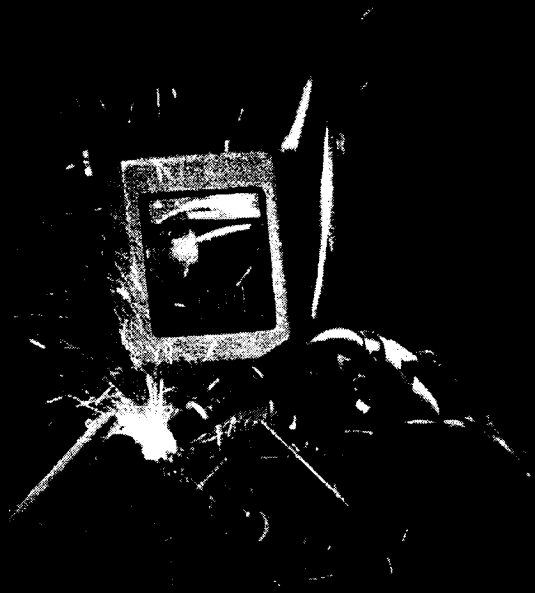
2007/03/19

**Examining Attorney**

HOLTZ, ALLISON

**MicrobondGecko**

Welding  
and  
**Gas Metal Arc Welding**  
(GMAW)



# Introduction

Purposes of this report: - to give an outline of welding processes  
- to present more particularly the GMAW  
(Gas Metal Arc Welding)

Welding is a process of metal joining by applying heat and sometime pressure

# Diversity of welding processes

## welding

### Solid state welding

Cold welding  
Friction welding  
Diffusion welding  
Flash welding  
Ultrasonic welding  
Explosion welding

### Soldering and brazing

Brazing

### Electrical energy

#### Consumable electrode

Shielded metal arc welding  
Submerged arc welding  
Flux cored arc welding  
Electrode gas welding  
Electroslag welding

#### Non consumable electrode

Gas tungsten arc welding  
Atomic hydrogen welding  
Plasma arc welding

### Chemical energy

Oxyacetylene welding  
Oxyfuel gas welding

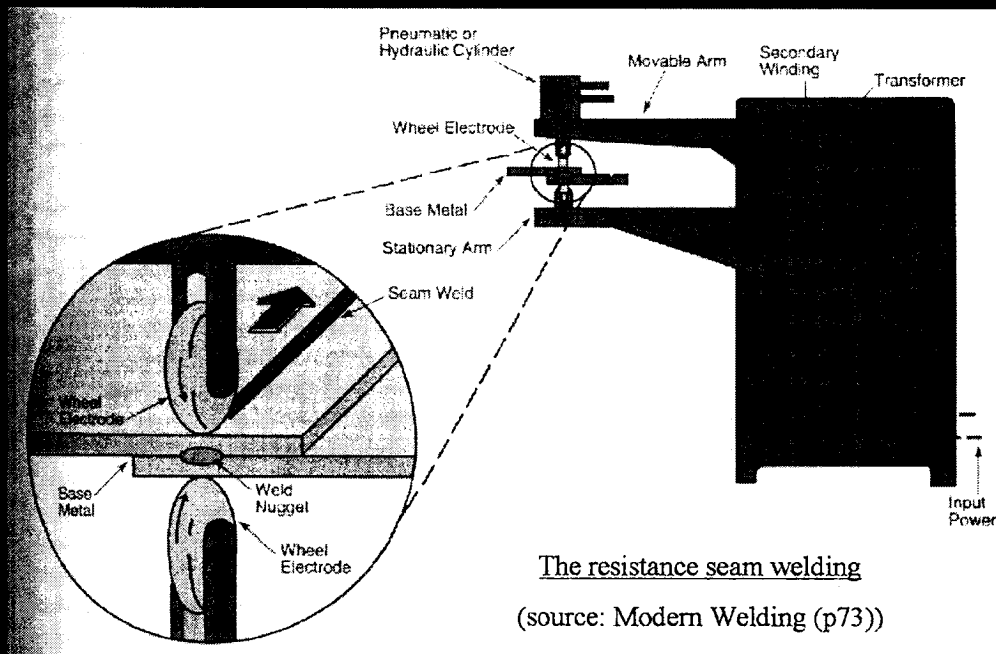
### Other processes

Laser beam welding  
Thermit welding  
Electron beam welding

## Solid state welding

It merges all the welding processes in which there is no fusion of the workpieces .

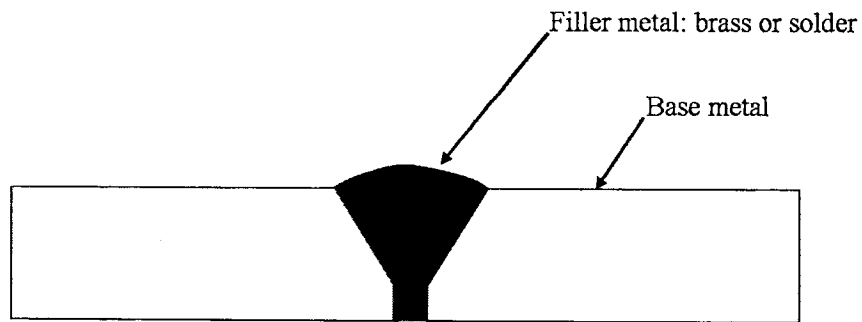
For example, in the solid welding process named resistance seam welding, the welding joint is produced in the wheel electrodes region by applied a current and a pressure without fusion of the base metal.





## Soldering or brazing

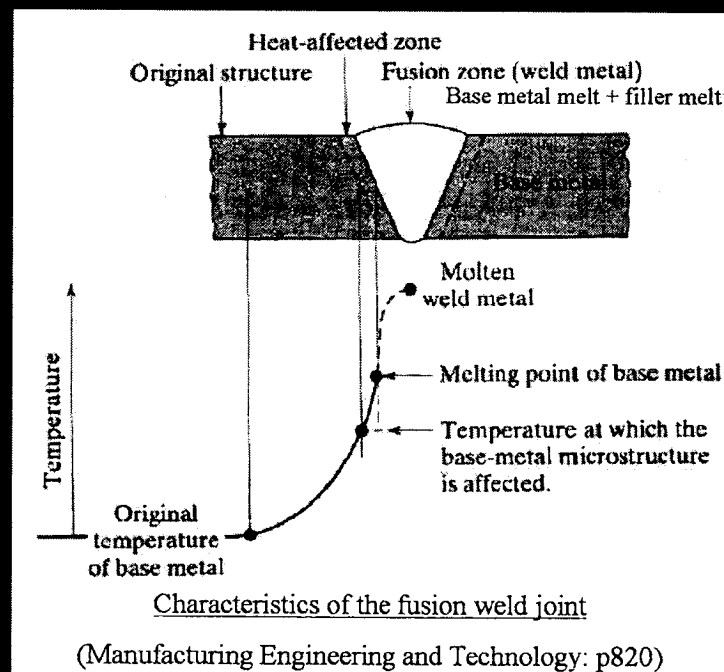
In these processes, only the filler metals which join the two pieces to be welded are melted and not the base metal. The braze metals have higher melting temperatures than the solder metals.



Characteristics of a brazed or soldered joint

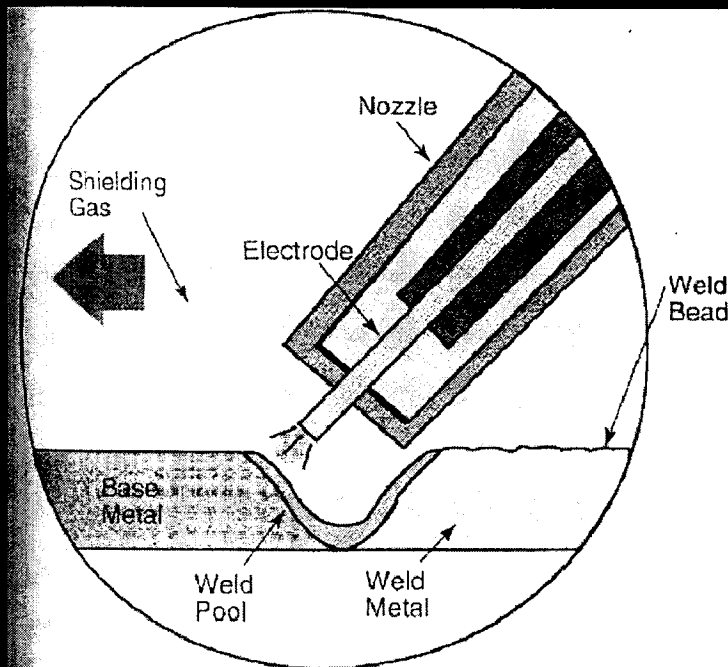
## Fusion welding

This process involves the partial melting of the two members welded in the joint region. The thermal energy required for this fusion is usually supplied by chemical or electrical means.



## The GMAW process

The heat is produced by an electric arc between the continuously fed metal electrode and the base metal. Both the base metal and the filler are melt. The weld area is protected by inert shield gases.



Characteristics of the weld joint by GMAW

(Modern Welding (p63))

### Weldable metals:

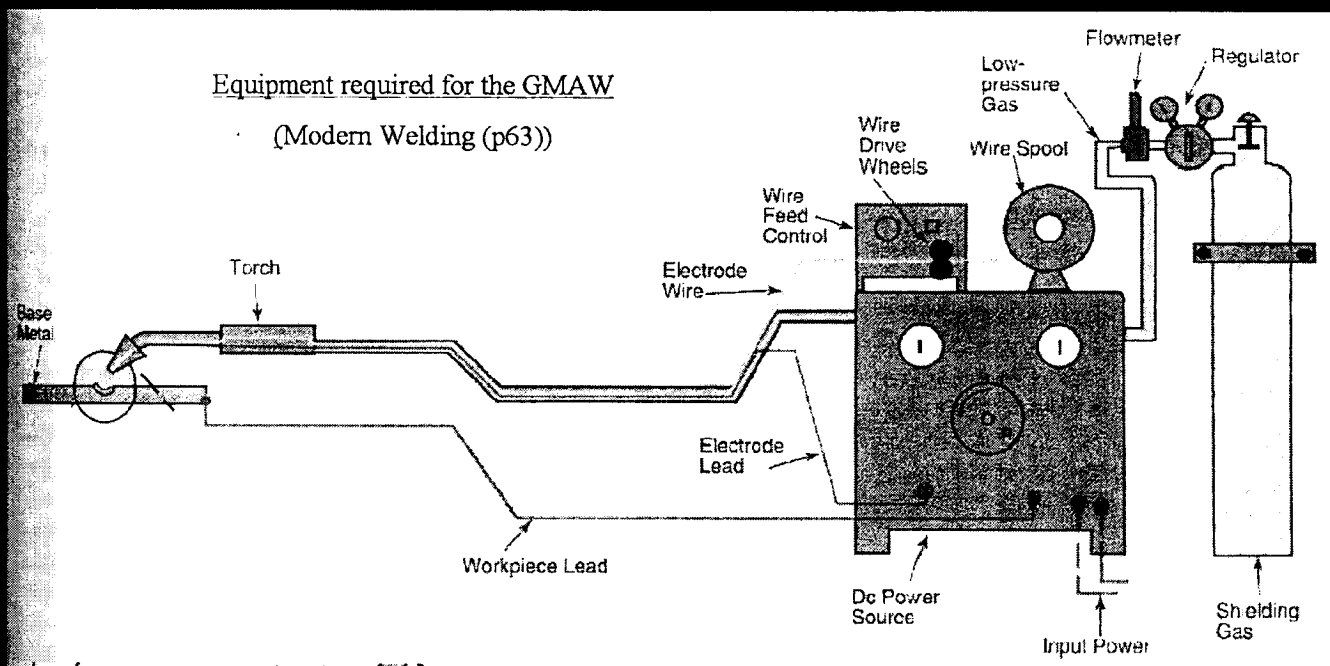
- steel carbon
- steel low-alloy
- steel stainless
- aluminum
- copper and its alloys
- nickel and its alloys
- magnesium
- reactive metal (titanium, zirconium, tantalum)

## The parameters of the GMAW process

- The method used to transfer the metal across the arc. There are four metal transfer methods (short circuit, globular, spray, pulsed spray). Each one requires different settings and has diverse use interests.
- The shielding gas.
- The electrode size.
- The electric parameters: voltage and current (the GMAW use the continuous current).
- The feed rate (speed of filler supply).
- The travel speed.

## Main equipment

- torch
- electric power source
- shielding gas source
- wire spool with wire drive control



# Safety

Burn hazard

Protection clothes and gloves

Eye protection against spatters and  
ultraviolet and infrared rays

Helmet or special glasses

Toxic gases:

- carbon monoxide (CO)
- ozone (O<sub>2</sub>)
- phosgene gases produced with  
some metals when welded

Well ventilated area

## Advantages of the GMAW

- wide range of weldable metals (high-quality welds on all commercially important metal)
- easy to learn
- can be used in all welding position
- low in cost (the equipment costs less than 3000 dollars)
- can be easily automated
- rapid, economic
- high level of productivity

## The GMAW in industry

Thanks to its numerous advantages, the Gas Metal Arc Welding is the most extensively used process in metal-fabrication industry.

But the GMAW is not widely used in aeronautics industry because it produce low mechanical properties weld. One of the current applications of GMAW is in the automatic welding of the vanes of the Patriot missile. These vanes consists of an investment cast frame of 17-4 PH stainless steel over which sheet metal of the same composition is welded. This application benefits from the low cost of GMAW, while extreme reliability is not as important as in manned aircraft.



## Works referred to

### Books:

- Manufacturing engineering and technology (Serope Kalpakjian, Steven R. Schmid)
- Modern welding (Althouse, Turnquist, Bowditch, Bowditch)

### Article:

<http://lure.mit.edu/~pat/publications/papers/2001aerowel.pdf>



search by keyword



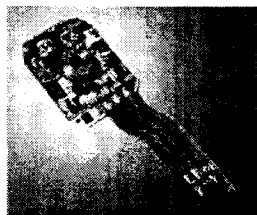
HOME TECHNOLOGY APPLICATIONS SERVICES PRODUCTS ABOUT MIYACHI EUROPE CONTACT US

Applications » Electronics

## Electronics

### Typical Electronics Applications:

- Relay Terminal Connection
- Leadframe Assemblies
- Electrical Connectors
- Solenoid Assembly
- Disc Drive Assemblies
- Power SCR
- Electron Gun Assembly
- Read / Write Armatures



### Soldering & Bonding

The precision control bonding and soldering systems are applied in almost every electronic assembly activity: wire to pcb soldering, flexfoil to pcb- soldering, chip on glass bonding, chip on flex bonding, heat-stacking of pcb's into housing: all processes require intensely controlled joining. Both our standard desk-top and our in-line custom systems provide you with a reliable production tool.

### Resistance- & Laser Welding

The fine welding control of both resistance and laser welding are well suited to electrical applications that require precision and low heat input welding solutions. The high speed non-contact clean laser marking process is also well suited to high quality direct part marking on ever decreasing component sizes.

### Dispensing

In almost every electronics manufacturing process, the use of one or more different sorts of dispensing technologies (time/pressure, volumetric, or jet-dispensing) is standard. Whether it is a UV curing adhesive, a CA (super-) glue, or an epoxy potting that is required, a bench-top or in-line dispense unit is usually in place. All equipment and products from the portfolio of **MIYACHI EUROPE** are geared towards a highly cost effective process, as precise as it is needed.



*Spirit of Innovation*

search MUC by keywords >>

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#### Related Links

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- High Speed Seam Welders  
UB25 Linear DC Welding  
Control with Built-in Monitor  
LMV1000 Laser Marker  
Class I Laser Workstations  
LW5A / 15A / 25A - Air Cooled,  
Compact Spot Welders  
\*\*NEW\*\* LW2AG - Micro-Welder  
for "Red" Metal Welding\*\*

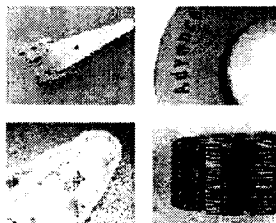
#### More Resources

" Red Metal, Green Lasers

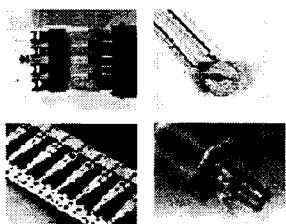
### Electronics Applications

#### APPLICATIONS INCLUDE:

- " Read / Write Armatures
- " Electron Gun Assembly
- " Power SCR
- " Disc Drive Assemblies
- " Solenoid Assembly
- " Electrical Connectors
- " Leadframe Assemblies
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### Fine Spot Resistance Welding

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Advanced Capacitive Discharge Welders (patent pending)

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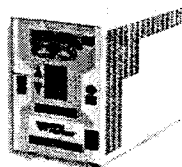
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Resistance Welding UB25 Linear DC Welder Applications



Resistance Welding UB25 Linear DC Welder

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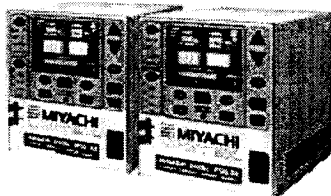
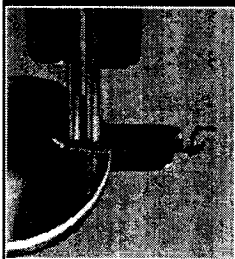
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### Fine Spot Resistance Welding



Advanced Capacitive Discharge Welding Equipment from Miyachi Unitek

"Fine spot" resistance welding or micro welding generally refers to applications joining either conductive materials, such as silver or copper where the parts are .0003"-.040" thick, or resistive materials, such as tungsten or titanium, where parts are .0008"-.050" thick. Typical fine spot resistance welding and micro welding applications include implantable medical devices, medical components and devices, automotive electronics, sensors, and controls, computer and disk drive components, batteries, and more.

Resistance welding equipment technologies offered include High Frequency (HF) inverter welding equipment, Linear DC welding equipment, Capacitive Discharge (CD) welding equipment and AC welders, and feature both

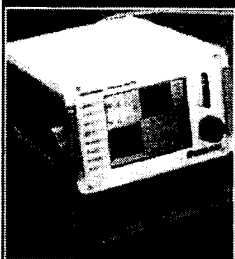
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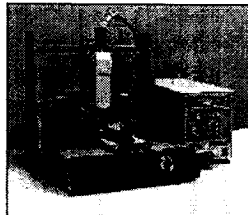
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### Bonding Systems

Hot bar bonding systems can be used for a variety of applications including hot bar reflow soldering, heat seal bonding, conductive adhesive bonding and heat staking. Hot Bar Reflow Soldering is a selective soldering process where two solder or adhesive coated, or pre-fluxed parts are heated to a high enough temperature to cause the anisotropic conductive adhesive (ACA) or solder to melt, flow, and re-solidify, forming a permanent bond between the parts. Hot bar bonding is different from traditional soldering in that the solder reflow is done using a 'thermode' which is rapidly heated and cooled for each connection.

#### Hot Bar Bonding Products/Applications:

- Basic Heat Seal Machine - DT-150-PH
- Manual Linear Slide Hot Bar System - DT-250-PH/DT-260-PH
- Manual L/R Slide Hot Bar Soldering, Reflow Soldering and Hot Bar Bonding System - DT-270-PH
- Automatic Linear Slide Hot Bar Bonding System - DT-350-PH/DT-360-PH
- Automatic Rotary Table Hot Bar System - DT-440-PH/DT-450-PH
- DT-500 Bonding System
- Standalone Basic Hot Bar Reflow Soldering System - Uni-Base
- Standalone Manual Linear Slide Heatseal System - Uni-Slide
- Uni-Slide Plus - Standalone Automatic Linear Slide Heat Sealing System
- Standalone Manual Rotary Hot Bar & ACF Bonding System - Uni-Turn
- Standalone Automatic Rotary Heat Seal Equipment - Uni-Turn Plus
- In-line Hot Bar Systems - Uni-Line
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### Bonding Systems

rapidly heated and cooled for each connection.

Conductive adhesive bonding is a similar technique used for attaching displays to PCBs with anisotropic conductive adhesive and flex foils. Anisotropic conductive adhesive has conductive particles, which are commonly used for electrical contact. Before connection, an insulating anisotropic conductive adhesive separates the conductive particles. When a heating element (the hot bar) compresses the parts together, the anisotropic conductive adhesive flows and the conductive particles are trapped, resulting in an electrical connection.

#### Hot Bar Bonding Products/Applications:

- Basic Heat Seal Machine - DT-150-PH
- Manual Linear Slide Hot Bar System - DT-250-PH/DT-260-PH
- Manual L/R Slide Hot Bar Soldering, Reflow Soldering and Hot Bar Bonding System - DT-270-PH
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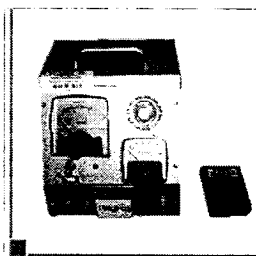
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## Resistance Soldering Machines

The machine is widely used for carrying out resistance welding process. Resistance welding is a technique, in which heat required to melt solder is acquired directly by passing a high amperage electrical current through a resistive material.

#### Soldering Process

In resistance soldering, a pair of carbon electrodes is used to generate the heat that holds the metal area to be welded. The electrical current is carried on from one electrode to one electrode through the metal and then into the other electrode. The passage of current leads to heating of the metal.



Basically, there are three components of resistance welding machine :

- A resistive material to generate the heat
- A specialized step-down transformer that will generate the appropriate current
- Ability to complete an electrical circuit

#### Benefits of Resistance Welding Machine

There are various advantages of using resistance welding machine. Some of them are :

- The machine can be used to eliminate a flame hazard and oxidation
- The machine can be used in conditions which requires restricting heat to a limited portion of the surface
- Ideal for conditions where the part is inaccessible for soldering irons

#### General Information

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#### Uses & Applications

There are various applications of resistance welding machines like :

- Automotive industry
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- Soldering electrical & electronics components
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## Joining Titanium

### Abstract:

A great tonnage of fabricated metal components requires joining in some form or other. These joining methods may include welding, brazing, soldering, riveting, or bolting. Titanium, therefore, in order to be a useful structural metal for such applications as aircraft, bridges, pipes, tanks, vehicles, and ships, must have the ability to be joined to it self and to other metals.

A great tonnage of fabricated metal components requires joining in some form or other. These joining methods may include welding, brazing, soldering, riveting, or bolting. Titanium, therefore, in order to be a useful structural metal for such applications as aircraft, bridges, pipes, tanks, vehicles, and ships, must have the ability to be joined to it self and to other metals.

A joint, in order to be useful, must possess mechanical properties which meet the service requirement specifications of the end product. Intensive research and development of the techniques of titanium joining have reduced a seemingly insurmountable problem to one of practical solution with precautionary techniques.

## Welding

Welding is the major method employed in joining titanium. Whereas initial attempts at welding titanium indicated the problem to be one of great difficulty, more extensive investigation revealed the problem to be entirely surmountable with application of proper techniques.

With careful choice of materials, sound welds embodying strength, ductility, and resistance to impact loading can be achieved. A selection of material of low interstitial content, as indicated by chemical analysis, should permit a sound weld with good properties as-welded, provided additional contamination is not introduced by the surrounding atmosphere, and the beta content is not too high.

With low interstitial content, unalloyed titanium is readily weldable. However, the typical alpha-beta alloys, containing manganese, chromium, iron, vanadium, and molybdenum, when welded usually have a much lower bend ductility and notch toughness. This bend ductility and notch toughness decrease severely as the total alloy content of beta stabilizing elements exceeds 3%. Such alloys may contain amounts of the alpha stabilizers, aluminum and tin, to permit a greater alloy content without

stabilizers, aluminum and tin, to permit a greater alloy content without further loss of ductility.

**Resistance Welding.** Spot, seam, and flash welding are all resistance-welding processes, which have been successfully applied to titanium. Resistance welding is a pressure welding process wherein the heat is obtained by the resistance of the metal to the flow of electric current. In spot welding the heat is restricted to a fairly small section of the lapped area of the parts to be joined.

In flash welding, the heat is obtained from an arc established between the pieces to be welded by electrical resistance. When sufficient heat for proper welding is obtained, pressure is applied to consummate the weld. This procedure is applicable to both unalloyed and alloyed titanium. In the case of the alloyed material there is some loss in ductility which may be restored by post-heat treatment.

**Pressure Welding.** In this method of welding, the metal is joined under high pressure with or without heat. In cold welding titanium, the metal surfaces are brought into intimate contact, and high pressures are applied to produce a high strength bond across the weld. The deformation, in the form of upset or bulged metal, is removed to restore the original shape.

The pressures required are dependent upon the size and type of material. The process also requires at least 85% deformation for a high strength bond and thus necessitates using ductile material. Fairly strong bonds of titanium with itself, copper, and steel have been produced.

**Fusion Welding.** The most common method of welding is the fusion technique. Fusion welding involves various processes in which metals are joined together by contact in the molten state at the surfaces to be joined. This is accomplished either with or without the use of a filler metal and without the application of mechanical pressure.

The most common production method employs a welding torch designed to permit the inert gas to flow through it. This technique develops an envelope of protective gas around the electrode and weld metal. The envelope moves with the torch and thus is constantly covering the new weld puddle. This movement of the shield, however, uncovers the solidified but still hot weld deposit and here some contamination is picked up.

Helium is particularly effective for backing because it is lighter than either air or argon and consequently lies up against the underside of the weldment. Because of the very great reactivity of titanium at elevated temperatures, the inert-gas shield must be of high purity or it will in itself be a source of contamination.

Fusion welding of titanium, therefore, differs from that of other metals in that its high reactivity requires careful control of the surrounding atmosphere. The problems encountered in joining titanium to dissimilar metals by welding methods still remain to be resolved. However, joining of titanium to dissimilar metals by methods other than welding has shown better promise.

## Brazing and Soldering

Where welding is neither practical nor economically feasible, it may be desirable to consider the brazing or soldering of titanium. Brazing is a joining process wherein the filler metal has a melting point greater than 800°F (430°C), but less than that of the materials to be joined.

Soldering, on the other hand, employs filler metal which melts at less than 800°F (430°C) and is commonly applied to thin-gauge material or wire.

Of the conventional metals employed in the brazing of steel, only pure silver and aluminum have been applicable to titanium with satisfactory results. High strength aluminum alloys have produced brittle impractical joints. Other metals such as zinc and tin will not adequately wet the titanium surface.

**Gas Brazing.** Of the many methods for gas brazing other metals, only the oxyacetylene gas has been found effective to date with titanium in that the gas employed does not embrittle the material. With a similar brazing method employing pure aluminum in place of pure silver, reasonably ductile but low strength joints are obtained.

In gas brazing aluminum to titanium, the titanium part is dipped into molten aluminum; the aluminum-clad titanium is then brazed to the aluminum part by conventional aluminum brazing techniques.

**Furnace Brazing.** By brazing in a furnace with a protective atmosphere, the complexity of the gas brazing procedure is simplified. In place of the special fluxes a simple mixture of silver chloride and potassium chloride or manganese chloride and potassium chloride is sufficient. Also, multiple brazing operations are capable of being simultaneously performed with heat applied uniformly to all surfaces of the part.

These advantages, however, are applicable only to small parts limited by furnace dimensions. Longer time cycles are required in furnace brazing because of the absence of localized heating. This results in thicker melting layers which somewhat decrease ductility and strength, especially with the aluminum-brazed joint.

**Resistance Brazing.** Resistance brazing differs from resistance welding in that a low melting metal is placed between the two surfaces to be brazed. Water-cooled copper electrodes have proved preferable to graphite and other high electrically resistant but contaminating materials. Titanium in itself has sufficient electrical resistance necessary to heat the surfaces. With high currents, short times, and low pressures, strengths superior to those obtained in gas brazing have been achieved in a pure silver.

**Soldering.** The successful soldering of titanium has been demonstrated. To obtain a rapid economical joint requiring little strength, soldering is preferable to other methods of joining. Samples should be prepared by depositing of thin films of silver, copper, or tin on titanium from their chloride salts. This is usually accomplished by heating the chloride salt-

chloride salts. This is usually accomplished by heating the chloride salt-coated titanium in a helium atmosphere furnace. The resultant film can be wetted with either a 60% tin-40% lead or a 50% tin-50% lead solder employing commercial soldering fluxes.

### **Mechanical Joining**

**Riveting.** Riveting is the joining of two metals by means of metal fasteners which mechanically lock them selves in position. This method of joining is especially applicable to the joining of highly stressed parts, the forming of a discontinuous joint, and in cases where the work is accessible from only one side.

Titanium is being riveted with stainless steel, Monel, high strength aluminum, and titanium rivets by conventional techniques. With titanium rivets the driving time is increased 65% over that employed for high strength aluminum rivets. Rivets are cold-driven, and rivet holes require the maintenance of close tolerance to insure good gripping. When it is necessary to have flush-head rivets, dimpling is carried out at temperatures of 500 to 600°F (260 to 315°C).

When riveting titanium to dissimilar metals or when riveting titanium with aluminum rivets, precautions must be taken to suppress galvanic corrosion.

**Bolting.** In this method of joining, the mechanical bond can be readily removed without destruction of the part. Titanium can be joined to itself or dissimilar metals with titanium bolts or with cadmium-plated steel bolts.

With titanium bolts, the locknuts are plated with rhodium or silver to prevent galling and seizing of the nut to the bolt. Some increase in galvanic corrosion has been noted with the application of the cadmium-plated fasteners. Teflon coatings on the threaded parts have been reported to reduce greatly seizing and galling of titanium. Galvanic corrosion is also minimized by the corrosion resistance of the teflon.

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Welders and Parts Thereof. First Use: 1945/00/00. First Use In  
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Parts-Namely, Bushings, Rings, Liners, Sleeves, Bearing Shoes, Seals,  
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Class Status -- ACTIVE. IC 006. US 013. G & S: metal alloys in the form of powder and solids for use in welding, brazing, and soldering operations. First Use: 1990/12/31. First Use In Commerce: 1990/12/31.

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Class Status -- ACTIVE. IC 009. US 021 034 039. G & S: electric apparatus used in welding soldering, and brazing processes; namely, electric welding and arc welding apparatus; safety helmets for use in welding, brazing, and soldering operations. First Use: 1990/12/31. First Use In Commerce: 1990/12/31.

**Goods/Services**

Class Status -- ACTIVE. IC 041. US 107. G & S: instructional and teaching services, all relating to fault/treatment diagnosis, maintenance, renovation and/or repair of installations, machines, or appliances having to do with metal plating, coating, shaping, and welding and of parts and fittings of installations, machines, or appliances having to do with metal plating, coating, shaping, and welding. First Use: 1990/12/31. First Use In Commerce: 1990/12/31.

**Goods/Services**

Class Status -- SECTION 8 - CANCELLED. IC 040. US 100 103 106. G & S: [ welding and plating services; service of applying protective coatings to metallic surfaces; metal shaping services ]. First Use: 1990/12/31. First Use In Commerce: 1990/12/31.

**Goods/Services**

Class Status -- SECTION 8 - CANCELLED. IC 037. US 100 103 106. G & S: [ maintenance, renovation, and/or repair services for metallic and/or synthetic surfaces of machines and appliances including turbine blades, boring tools, cutters, and other parts and fittings of such machines or appliances ]. First Use: 1990/12/31. First Use In Commerce: 1990/12/31.

**Filing Date**

1991/01/09

**Examining Attorney**

SZOKO, MICHAEL A.



**Castolin Eutectic**  
**Eutectic Castolin**

Print: Jan 14, 2009

75912387

**DESIGN MARK**

**Serial Number**

75912387

**Status**

SECTION 8 & 15-ACCEPTED AND ACKNOWLEDGED

**Word Mark**

AMERIFLAME

**Standard Character Mark**

No

**Registration Number**

2654749

**Date Registered**

2002/11/26

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(1) TYPED DRAWING

**Owner**

Uniweld Products, Inc. CORPORATION DELAWARE 2850 Ravenswood Road Fort Lauderdale FLORIDA 33312

**Goods/Services**

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G & S: Hand-held gas operated welding and cutting machines and parts and accessories therefor, namely, torch holders, cutting attachments, cutting torches, cutting tools, welding tips, heating nozzles, cutting tips, gouging tips, gas-air torch handles, brazing tips, soldering tips, flint lighters for use with gas welders; electric welding machines. First Use: 2002/08/01. First Use In Commerce: 2002/08/01.

**Goods/Services**

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S: Holders for welding electrodes, plasma cutters and torches, welding cable, electrode welding torches, electric cutting torches, electric mig welding torches, electric welding tips, tip cleaners and wire feeders for use with electric arc welders, flint lighters for use with electric arc welders; pressure reducing regulators and flow meters for compressed gas, dial indicating pressure gauges for use with regulators and to check pressure directly; safety goggles and helmets

**Print: Jan 14, 2009**

**75912387**

for use in welding. First Use: 2002/08/01. First Use In Commerce:  
2002/08/01.

**Goods/Services**

Class Status -- ACTIVE. IC 017. US 001 005 012 013 035 050. G & S:  
Rubber hose for use in connection with welding. First Use:  
2002/08/01. First Use In Commerce: 2002/08/01.

**Filing Date**

2000/02/07

**Examining Attorney**

BRACEY, KAREN

**Attorney of Record**

Kevin S. Lemack

**AMERIFLAME**

Print: Jan 14, 2009

76092410

**DESIGN MARK**

**Serial Number**

76092410

**Status**

SECTION 8 & 15-ACCEPTED AND ACKNOWLEDGED

**Word Mark**

ROCKMOUNT

**Standard Character Mark**

No

**Registration Number**

2655527

**Date Registered**

2002/12/03

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(1) TYPED DRAWING

**Owner**

CHF ASSOCIATES, LLC LIMITED LIABILITY COMPANY WASHINGTON 11909 SE 95TH ST. P.O. BOX 2909 VANCOUVER WASHINGTON 98668

**Goods/Services**

Class Status -- ACTIVE. IC 006. US 002 012 013 014 023 025 050. G & S: metal welding wire made from mig alloys and tig alloys; soldering alloys comprised of silver, copper and zinc, brazing alloys comprised of bronze, steel and aluminum, metal hard-surface wear plates and wear tiles for reinforcement of wear surfaces, namely, snow plows, chutes for concrete and gravel trucks and coal handling equipment, fork lifts, heavy duty lawn and brush mowers, rock crushers, farm combines and swathers, glass crushers and metal threaded insert fasteners. First Use: 1971/09/01. First Use In Commerce: 1971/09/01.

**Goods/Services**

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G & S: power-operated welding equipment used for cutting, soldering and brazing, namely, torches and other spray powder application equipment, namely, oxy-acetylene torches and metallizing torches. First Use: 1971/09/01. First Use In Commerce: 1971/09/01.

**Goods/Services**

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S: welding electrodes, namely, arc rods. First Use: 1971/09/01. First Use In Commerce: 1971/09/01.

**Goods/Services**

Class Status -- ACTIVE. IC 001. US 001 005 006 010 026 046. G & S: welding-related chemicals, namely, fusion spray powder, and exothermic bonding powder; flamehold [ case-hardening compound ] , abrasives for preparation of surfaces to be welded and for finishing of surfaces that have been welded. First Use: 1971/09/01. First Use In Commerce: 1971/09/01.

**Filing Date**

2000/07/20

**Examining Attorney**

ROBINSON, JOHANNA

**Attorney of Record**

Timothy M. Whalen



ROCKMOUNT

Print: Jan 14, 2009

77096007

## DESIGN MARK

### Serial Number

77096007

### Status

REGISTERED

### Word Mark

PANASONIC

### Standard Character Mark

Yes

### Registration Number

3425266

### Date Registered

2008/05/13

### Type of Mark

TRADEMARK

### Register

PRINCIPAL

### Mark Drawing Code

(4) STANDARD CHARACTER MARK

### Owner

PANASONIC CORPORATION CORPORATION JAPAN 1006 OAZA KADOMA, KADOMA-SHI  
OSAKA JAPAN 571-8501

### Goods/Services

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G  
& S: machinery, namely, metal cutting apparatus by use of arc, gas or  
plasma, industrial robots, electronic component placement apparatus,  
electronic component insertion apparatus, soldering paste printing  
apparatus, adhesive dispensing apparatus for electronic component  
placement, electronic component feeder, die bonding apparatus, wire  
bonding apparatus, flip chip bonding apparatus, assembly apparatus for  
flat panel display, dry etching machinery, micro soldering apparatus,  
laser processing apparatus, Co2 laser oscillators for soldering,  
jointing, and processing. First Use: 1955/00/00. First Use In  
Commerce: 1961/00/00.

### Goods/Services

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S:  
laser inspection apparatus other than for medical purposes; plain  
paper copiers and replacement parts therefore; electronic white  
boards; automatic document feeders; batteries and dry cells; battery

chargers; rechargeable batteries; batteries; electric switches; electric sockets; electronic time switches; magnetic contactors and starters; electronic limit switches; remote lighting control system; audio mixers; audio cable/video cable; car audio apparatus comprised of optical disc player, cassette player and radio; parts for car computers, car audio/visual equipment, and car navigation systems, namely, mounting systems comprising bracket, wiring and trim frame; wireless microphone system consisting of wireless microphones, wireless transmitters, wireless powered speaker, wireless receivers, wireless amplifier, diversity tuner; digital multi equalizer; digital multi processor; power amplifier; television receivers; cathode ray tube displays; plasma television receivers; plasma displays; plasma display panels; power supply unit for plasma display panels; parts for plasma display panels, namely, stands and wall mount brackets; LCD television receivers; liquid crystal displays; liquid crystal display panels; color projection television receivers; television receivers incorporating video tape; television receivers incorporating disk player; video tuners; liquid crystal display projectors; liquid crystal display parts, namely, ceiling mount brackets; lamps for liquid crystal displays projectors; digital light processing projectors; lenses for video projectors; video cassette recorders/players; camcorders and replacement parts therefore; cables for camcorders; cases for camcorders; electric viewfinders for camcorders; waterproof covers and cases for camcorders; alternating current adapters for camcorders; batteries for camcorders; shoulder straps for camcorders; blank digital high definition video cassette tapes; color image large-scale display apparatus for displaying video in large public areas, stadiums and halls; cable television systems comprising digital set top boxes; electric optical display boards; surveillance cameras; closed-circuit video equipment systems comprising cameras, recorder and monitor; electric and electronic video surveillance cameras; television cameras; video switchers for editing cinema or commercial video images; wireless cameras; wireless camera used for monitoring purposes; video signal converter for network cameras; recording software exclusively used for network cameras; network camera controllers; servers for network cameras; convertible cameras; switches for live image production; graphic processors for real-time program making; DVD video recorders/players; LCD video monitors, wireless displays; video projector parts, namely, carrying handle; all-in-one DVD video cassette recorder/players; parts for liquid crystal display televisions, namely, stands in the nature of table racks; table racks for liquid crystal display televisions; optical disc recorders; optical disc players; optical disc cartridges; facsimile transceivers; telephones; cordless telephones; conference speakerphones; telephone answering machines; private automatic branch switching systems for distributing and controlling telephone function and features for business and home use; remote controllers for audio/visual machines; photo printers; video printers; multi-function printers; visual/ information distribution system comprising secure digital signage software for delivering video to remotely located video displays; digital broadcasting system which consists of video

cameras for digital broadcast, switcher; iris recognition access control system comprised of enrollment reader, iris server, card reader and access control server; iris reader camera system; computers; micro processor unit cooling fans; computer software for classifying, managing, browsing and editing documents and images; image scanners; printers for computers; PC cards; floppy disk drives; card readers and card readers/writers for use at point-of-sale computer terminals, credit authorization computer terminals, banking computer terminals, time and attendance computer terminals, office machine terminals for regulating access to computers and premises; point-of-sale computer terminals; network cameras; printers incorporating a scanner and facsimile and also having network connectability; ethernet power supply adapters; network disk recorders; memory card camera recorder; memory card recorders; memory card drives; digital video cassette recorders/players; digital video cassette camera recorders; video encoder cards; port replicators; car adaptors for computers; blank video cassette tapes; cleaning tapes for tape drives of audio/video tape recorders/players; blank D-VHS video cassette tapes; blank digital video cassette tapes; blank audio cassette tapes; blank optical discs; thermo luminescence dosimeters; dosimeters; modulators for changing frequencies within a radio circuit; hour meters for measuring operating time of manufacturing machines; electronic sensors for detecting the angles of rotating axes in moving equipment and products; microcomputers; film capacitors; membrane units for oxygen enrichment comprised of membrane film and frame; electric tuners for televisions; radio frequency front end system units comprised of splitter, tuner, video interface and multiplexer for removing image and sound signals from transmitted radio waves; radio frequency modulators; coin validating units; coin selector units; bill validating units; bill selector units; magnetic card readers/writers; speaker components, namely, speaker enclosures and speaker drivers; electrical DC/DC power converter modules used in electronic equipment; AC adapters; magnet rolls; converters; electrical inductors; condensers; filters of electric signals; light modulators; light deflectors; aspherical lenses; transformers; thermistors; varistors; surge absorbers; ceramic oscillators; surface acoustic wave oscillators; acousto-optic devices, namely, acousto-optic light modulator; electric resistors; potentiometers; trimmer potentiometers; thermal cutoffs; electric apparatus consisting of resistor array for interface circuits; electric apparatus consisting of capacitor array for interface circuits; electric apparatus consisting of resistor array and capacitor array for interface circuits; encoders; track ball input devices; electro luminescence elements; magnetic resistive elements; electric coils; choke coils; touch panels; remote controls for audio-visual equipment and home appliances; duplexers; surface acoustic wave filters; acoustic couplers; voltage controlled oscillators; radio frequency modules for CDMA; electronic components, namely, phase locked loop synthesizer modules; inverters; electric power supplies; fluorescent lamp inverter; ballast for discharging lamps or tubes; bead cores; bead arrays; micro chip fuse; electric flat irons; electric eyelash

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**77096007**

curlers; electronic counters for determining production, occupancy and distribution quantities in manufacturing and commercial operations; temperature regulators; chargers for cameras; battery chargers; computer software for industrial equipment control; electric arc welders; instruments for measuring surface roughness. First Use: 1955/00/00. First Use In Commerce: 1961/00/00.

**Prior Registration(s)**

2219862;2701792;3108573

**Filing Date**

2007/01/31

**Examining Attorney**

HACK, ANDREA

**Attorney of Record**

Gregory A. Stobbs / Geoffrey D. Aurini

**Panasonic**

Print: Jan 14, 2009

77271057

**DESIGN MARK**

**Serial Number**

77271057

**Status**

REGISTERED

**Word Mark**

SNAKEBITE

**Standard Character Mark**

Yes

**Registration Number**

3554917

**Date Registered**

2008/12/30

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(4) STANDARD CHARACTER MARK

**Owner**

Safetrack Infrasytems SISAB AB CORPORATION SWEDEN SE-245 93 Lilla  
Mölleberga STAFFANSTORP SWEDEN

**Goods/Services**

Class Status -- ACTIVE. IC 006. US 002 012 013 014 023 025 050. G  
& S: Ingots of common metals; alloys, namely, brass, copper and  
silver; materials of metal for railway tracks, namely, metal railroad  
ties; non electric cables and wires of common metal; small items of  
metal hardware, namely, metal cable clips; pipes and tubes of metal;  
cable clips of metal, namely, copper clamps; gold solder, silver  
solder; metal brazing pins. First Use: 2007/12/31. First Use In  
Commerce: 2007/12/31.

**Goods/Services**

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G  
& S: Machines and machine tools, namely, solder machines, gas-driven  
welding and brazing machines; gas-driven brazing machines, namely,  
brazing guns. First Use: 2007/12/31. First Use In Commerce:  
2007/12/31.

**Goods/Services**

**Print: Jan 14, 2009**

**77271057**

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S:  
Welding and brazing apparatus, namely, welding masks, electrical  
welding and brazing torches, but not electrical wiring connectors that  
prevent shocks and fires; electrical cables, but not electrical wiring  
connectors that prevent shocks and fires; electrical cables for  
heating, but not electrical wiring connectors that prevent shocks and  
fires; cathode protection materials, namely, electrical cables for  
connection to cathode protection installations, but not electrical  
wiring connectors that prevent shocks and fires; grounding material,  
namely, copper and steel, for poles, rails and buildings; electrical  
batteries; battery chargers. First Use: 2007/12/31. First Use In  
Commerce: 2007/12/31.

**Filing Date**

2007/09/04

**Examining Attorney**

BUTLER, MIDGE

**Attorney of Record**

John Pickerill



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Print: Jan 14, 2009

78072476

**DESIGN MARK**

**Serial Number**

78072476

**Status**

REGISTERED

**Word Mark**

MEKA WELD

**Standard Character Mark**

No

**Registration Number**

2720090

**Date Registered**

2003/05/27

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(3) DESIGN PLUS WORDS, LETTERS AND/OR NUMBERS

**Owner**

Int'l Tech of Miami, Inc. CORPORATION FLORIDA 7202 N.W. 84th Avenue  
Miami FLORIDA 33166

**Goods/Services**

Class Status -- ACTIVE. IC 001. US 001 005 006 010 026 046. G & S:  
soldering chemicals and soldering flux. First Use: 2001/07/05. First  
Use In Commerce: 2001/07/05.

**Goods/Services**

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G  
& S: Parts and accessories for electric and gas welding machines,  
namely, cylinder valves. First Use: 2001/07/05. First Use In  
Commerce: 2001/07/05.

**Disclaimer Statement**

NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE "WELD" APART FROM THE  
MARK AS SHOWN.

**Filing Date**

2001/07/05

**Print: Jan 14, 2009**

**78072476**

**Examining Attorney**  
HELLA, AMY

**Attorney of Record**  
Jesus Sanchelima



**Meka**  
**W e l d**

Print: Jan 14, 2009

78768224

**DESIGN MARK**

**Serial Number**

78768224

**Status**

REGISTERED

**Word Mark**

STUD WELDING ASSOCIATES, INC. ULTRA ARC

**Standard Character Mark**

No

**Registration Number**

3297386

**Date Registered**

2007/09/25

**Type of Mark**

TRADEMARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(3) DESIGN PLUS WORDS, LETTERS AND/OR NUMBERS

**Owner**

Nelson Stud Welding, Inc. CORPORATION DELAWARE P.O. Box 4019 7900 West Ridge Road Elyria OHIO 440362019

**Goods/Services**

Class Status -- ACTIVE. IC 006. US 002 012 013 014 023 025 050. G & S: Welding filler made from common metals and their alloys; metal building materials and fasteners, namely, refractory anchors, Insulation lacing anchor, insulation self locking washers, lacing hooks, lacing rings, self stick insulation hangers, spindle insulation hangers; metal studs and anchors, namely capacitor discharge weld studs, flanged capacitor discharge weld studs, mini-flanged capacitor discharge weld studs, non-flanged capacitor discharge weld studs, non-flanged no thread studs, flanged no thread studs, capacitor discharge collar studs, flanged annular ring capacitor discharge studs, capacitor discharge weld studs with mushroom-style caps, cable tie base capacitor discharge studs; pipes and tubes of metal; metal ferrules, namely, ferrules for welding at an angle to a base plate, welding to curved surfaces, welding to edges of base plates, welding into fillets and onto heels, rectangular ferrules, welding to vertical surfaces, welding through metal deck, refractory anchor ferrules, special application ferrules, stand ferrules. First Use: 2005/12/07.

**Print: Jan 14, 2009**

**78768224**

First Use In Commerce: 2005/12/07.

**Goods/Services**

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G & S: Electric stud welding machines, chucks for stud welding machines, stud feeders and feeders for stud welding machines, feet for stud welding machines. First Use: 2005/12/07. First Use In Commerce: 2005/12/07.

**Goods/Services**

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S: Electric stud welding guns; Electric stud welding gun parts and accessories, namely arc ferrule grips, capacitor discharge adaptors, spark shields, B Collets Protectors, B stops, capacitor discharge collect inserts, ferrule tubes and tube bushings; Chucks for stud welding guns; Feet for stud welding guns; Welding power sources and controls for welding power sources, Electric arc stud welding guns, capacitor discharge stud welding guns, power cables for electric stud welding guns and power sources. First Use: 2005/12/07. First Use In Commerce: 2005/12/07.

**Disclaimer Statement**

NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE STUD WELDING ASSOCIATES, INC. AND ARC AND THE REPRESENTATION OF ANCHORS AND STUDS APART FROM THE MARK AS SHOWN.

**Colors Claimed**

Color is not claimed as a feature of the mark.

**Filing Date**

2005/12/07

**Examining Attorney**

FINE, STEVE

**Attorney of Record**

Kevin S. MacKenzie

**STUD WELDING  
ASSOCIATES, INC.**



Print: Jan 14, 2009

74093079

**DESIGN MARK**

**Serial Number**

74093079

**Status**

REGISTERED AND RENEWED

**Word Mark**

ALT

**Standard Character Mark**

No

**Registration Number**

1696530

**Date Registered**

1992/06/23

**Type of Mark**

SERVICE MARK

**Register**

PRINCIPAL

**Mark Drawing Code**

(3) DESIGN PLUS WORDS, LETTERS AND/OR NUMBERS

**Owner**

Applied Laser Technology, Inc. CORPORATION OREGON 14155 S.W. Brigadoon Court, Suite B Beaverton OREGON 97005

**Goods/Services**

Class Status -- ACTIVE. IC 040. US 106. G & S: material treatment services; namely, machining, drilling, scribing, skiving, cutting, resistor trimming, annealing, marking, printing, congealing, soldering, welding, etching, exposure, ablating, curing, and texturizing material with lasers. First Use: 1987/09/00. First Use In Commerce: 1987/09/00.

**Lining/Stippling Statement**

The lining shown in the drawing is a feature of the mark and not intended to indicate color.

**Filing Date**

1990/08/31

**Examining Attorney**

BOHANNON, LINDA E.



**Print: Jan 14, 2009**

**74093079**

**Attorney of Record**  
Charles D. McClung



Print: Jan 14, 2009

76103178

## TYPED DRAWING

### Serial Number

76103178

### Status

REGISTERED

### Word Mark

USINOR

### Standard Character Mark

No

### Registration Number

2676190

### Date Registered

2003/01/21

### Type of Mark

TRADEMARK; SERVICE MARK

### Register

PRINCIPAL

### Mark Drawing Code

(1) TYPED DRAWING

### Owner

ARCELOR FRANCE PUBLIC LIMITED COMPANY FRANCE 1-5 RUE LUIGI CHERUBINI  
SAINT DENIS FRANCE F-93200

### Goods/Services

Class Status -- ACTIVE. IC 006. US 002 012 013 014 023 025 050. G  
& S: RAW COMMON AND HALF-WORKED METALS AND THEIR ALLOYS, NAMELY, SCRAP  
IRON, STEELS, CAST IRON, STAINLESS STEELS, COATED STEELS AND SANDWICH  
PLATES OF THE SAME, FOR USE IN MANUFACTURE; METALLIC CONSTRUCTION  
MATERIALS AND TRANSPORTABLE METALLIC CONSTRUCTIONS, NAMELY, COATING  
METALLIC PLATES FOR CONSTRUCTION, METALLIC FLOORS, METALLIC  
PARTITIONS, METALLIC FRAMES, METALLIC MATERIAL FOR RAIL TRACKS;  
NON-ELECTRIC METALLIC WIRES AND CABLES; ALL IRON AND STEEL INDUSTRIAL  
PRODUCTS, NAMELY, ROCKER BARS, SHEET METAL, PLATES, STEEL STRIPS,  
CYLINDERS, COILS, STRIPS, PROFILES, RAILS, BARS, GIRDERS, BALLS, PLATE  
SLABS; EXTRA-HEAVY OXYGEN-CUT PARTS FOR FURTHER MANUFACTURING AND  
SHEET METAL; SHEET PILES, ARMORING; METALLIC PIPES AND TUBES; WELDING  
WIRE AND WIRE RODS; FORGED, MOLDED, MOLTEN, EMBOSSED, CHASED, WELDED  
OR MACHINED METALLIC PARTS WITH SHAPES USED IN PARTICULAR FOR THE  
THERMIC, CHEMICAL, PETROL, NUCLEAR INDUSTRY OR ANY OTHER ENERGY  
PRODUCING INDUSTRY AND IN THE MOTOR VEHICLE, AIRCRAFT, NAVAL, SPACE  
RAILWAY, CEMENT, BUILDING AND ARMAMENT INDUSTRIES; METALLIC

CONTAINERS; METALLIC BOXES; METAL TANKS; METAL PACKING; MOULDS FOR METALLIC FOUNDRIES, METALLIC GATES AND GRATING, METALLIC FENCES, METALLIC FRAME-WORKS; METALLIC HANDLING PALLETS; METALLIC LOCKSMITH AND HARDWARE FOR LOCKS; METALLIC SPRINGS; AND METALLIC HOOPS. First Use: 1967/00/00. First Use In Commerce: 1967/00/00.

**Goods/Services**

Class Status -- ACTIVE. IC 007. US 013 019 021 023 031 034 035. G & S: ROLLING MILLS; ROLL MILL CYLINDERS; CONTINUOUS METAL CASTING MACHINES; CUTTING MACHINES AND MACHINES FOR SHAPING, OXYGEN CUTTING, MACHINING; WELDING, THE END-TO-END JOINING AND CHASING OF METALS, STEEL WORKS CONVERTERS. First Use: 1967/00/00. First Use In Commerce: 1967/00/00.

**Goods/Services**

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S: COMPUTER SOFTWARE FOR USE IN DATABASE MANAGEMENT IN THE FIELD OF ANALYSIS, CONTROL AND MONITORING OF INDUSTRIAL PROCESSES FOR METAL WORKING, COMPUTER SOFTWARE FOR USE IN THE ANALYSIS, CONTROL AND MONITORING OF INDUSTRIAL PROCESSES USED IN METALWORKING AND IN ASSESSING QUALITY CONTROL OF THESE PROCESSES AS THEY APPLY TO IRON AND STEEL INDUSTRIAL PRODUCTS. First Use: 1967/00/00. First Use In Commerce: 1967/00/00.

**Goods/Services**

Class Status -- ACTIVE. IC 012. US 019 021 023 031 035 044. G & S: METALLIC AXLES AND WHEELS; METALLIC PARTS FOR MOTOR VEHICLES, NAMELY, CAR BODY PARTS, NAMELY, BRAKES, BODYWORKS, WINGS, DOORS, HOODS, TRUNKS, AND PARTS FOR MOTORS, NAMELY, OIL PANS, WATER PUMP GASKETS, MOTOR GASKETS, MOTOR HOUSING, AND MOTOR VEHICLE SUSPENSIONS. First Use: 1967/00/00. First Use In Commerce: 1967/00/00.

**Goods/Services**

Class Status -- ACTIVE. IC 040. US 100 103 106. G & S: TREATMENT OF MATERIALS, NAMELY, METALS; METALLIC COATINGS, ANY TREATMENT OF METALS AND ANY MECHANICAL, THERMOMECHANICAL OR CHEMICAL TRANSFORMATION OF THE PROPERTIES AND CHARACTERISTICS OF METALS; HARDENING OF METALS; FINISHING OF METAL SURFACES, SOLDERING, CHROMIUM PLATING; NICKEL PLATING; TINNING, ELECTROPLATING, ROLLING, ARMORING, CUTTING; POLISHING, MAGNETIZATION; CLADDING; DRAWING; PICKLING; WELDING OF METALS, WORKS RELATING TO FORGING, PRESSING, CLIPPING, MACHINING, ROLLING AND THE SHAPING OF METALS, RECYCLING OF METALLIC PRODUCTS, TREATMENT UNDER VACUUM, NITRIDING PROCESSES. First Use: 1967/00/00. First Use In Commerce: 1967/00/00.

**Foreign Country Name**

FRANCE

**Foreign Registration Number**

1385207

**Print: Jan 14, 2009**

**76103178**

**Foreign Registration Date**  
1967/01/18

**Foreign Expiration Date**  
2006/10/30

**Prior Registration(s)**  
0880327;0954290;1392944

**Filing Date**  
2000/08/04

**Examining Attorney**  
POWELL, LINDA

**Attorney of Record**  
PAUL W KRUSE